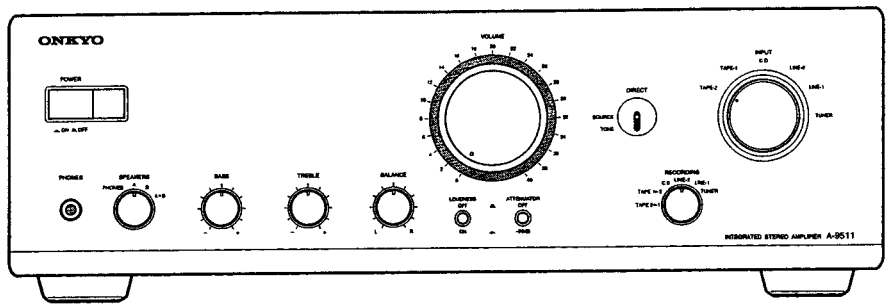
A-9511

Ref. No. 3563

ONKYO® SERVICE MANUAL

Integrated Stereo Amplifier
MODEL A-9511



Black and Silver models

BUP/SUP/GUP	230V AC, 50Hz
BUW/GUW	120V/220-230V AC, 50/60Hz

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL.
MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

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ONKYO®
AUDIO COMPONENTS

SPECIFICATIONS

Power output:	**60 watts per channel, min RMS, at 8 ohms, both channels driven from 20 Hz to 20 kHz, with no more than 0.06% THD.**
	2 × 100 watts at 4 ohms, 1 kHz(DIN)
	2 × 70 watts at 8 ohms, 1 kHz(DIN)
Total Harmonic Distortion:	0.06% at rated power
IM Distortion:	0.06% at rated power
Damping Factor:	90 at 8 ohms
Frequency and response:	10 Hz—100 kHz ±1 dB
Input sensitivity/impedance:	Tuner/CD/Line: 300 mV/25 kohms
	Tape Play: 300 mV/25 kohms
Output sensitivity/impedance:	Tape Rec: 300 mV/3 kohms
Bass control:	+14 dB –6 dB at 20 Hz
Treble control:	+9 dB –15 dB at 20 kHz
Loudness control:	+6 dB at 20 Hz
	+5 dB at 20 kHz
Signal to noise ratio (IHF-A):	Direct (CD): 109 dB (0.3 V input)

General

Power supply:	European models: AC 230V, 50Hz
	Worldwide models: AC 120 and 220V switchable, 50/60Hz
Dimensions:	435 (W) × 145 (H) × 331 (D) mm (17-1/8" × 5-11/16" × 13-5/16")
Weight:	8.1 kg, (17.9 lbs.)

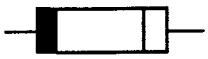
Remote control RC-314S

Transmitter:	Infrared
Signal range:	Approx. 5 meters, 16ft
Power supply:	Two "AA" batteries (1.5 V × 2)

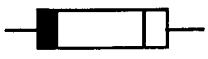
Specifications and features are subject to change without notice.

SERVICE SAFETY PRECAUTIONS

1. Replacing the fuses



This symbol located near the fuse indicates that the fuse used is fast operating type. For continued protection against fire hazard, replace with same type fuse. For fuse rating refer to the marking adjacent to the symbol.



Ce symbole indique que le fusible utilise est a rapide.
Pour une protection permanents, n'utiliser que des fusibles de meme type.
Ce darnier est indique la qu le present symbol est appose.

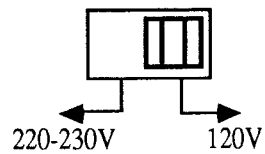
Circuit No.	Part No.	Description
F901	252164	5A-UL/T237 <WT>
F902	252075	2.5A-SE-EAK
F903	252070	1A-SE-EAK <P><PT>

NOTE: <P> : 230V model only
<WT> : Taiwanes model only
<PT> : Asian model only

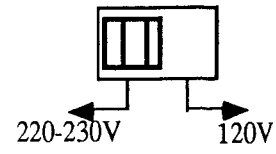
2. Voltage Selector (Rear Panel)

Worldwide models are equipped with a voltage selector to conform to local power supplied.
Be sure to set this switch to match the voltage of the power supply in your area before plugging in the unit.
Models without a voltage selector can only be used in area where the power supply is the same as that of the unit.

VOLTAGE SELECTOR



at AC 120V

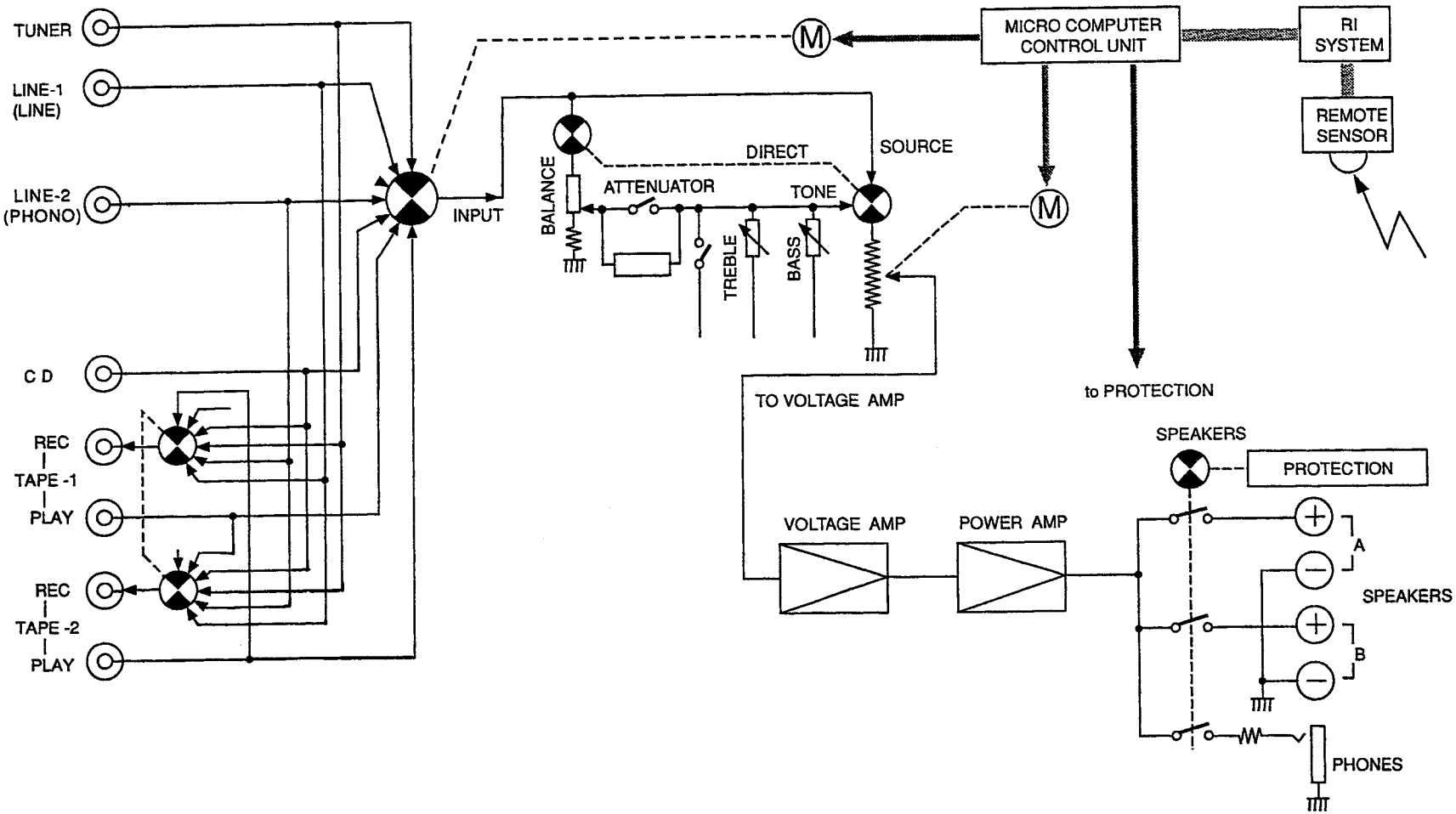


at AC 220-230V

Setting the voltage selector

1. Determine the proper for voltage for your area : 220-230V or 120V.
2. If the preset voltage is not proper for your area, insert a screwdriver into the groove in the switch. Slide the switch all the way to the right (120V) or to the left (220-230V), which-ever is proper.

BLOCK DIAGRAM



ADJUSTMENT PROCEDURES

1. Preparations

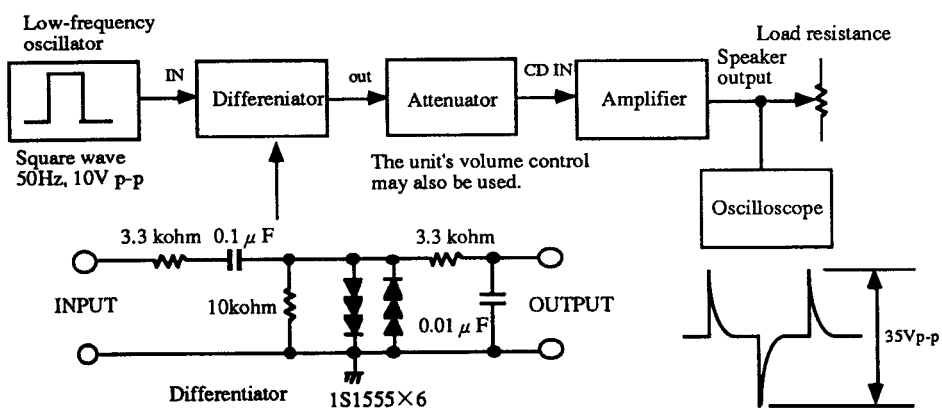
1) Place the unit on the workbench. (There should be about 15 mm of space between the base plate of the unit and the work surface.)
2) Set up the unit as follows.
   (1) No load
   (2) No signal
   (3) Volume turned all the way down
   (4) Speaker switch OFF
   (5) Power switch OFF
   Note) Check the following points before making adjustments
   (1) The power switch should be OFF.
   (2) The interior of the unit should not be warm.

2. Idling current adjustment

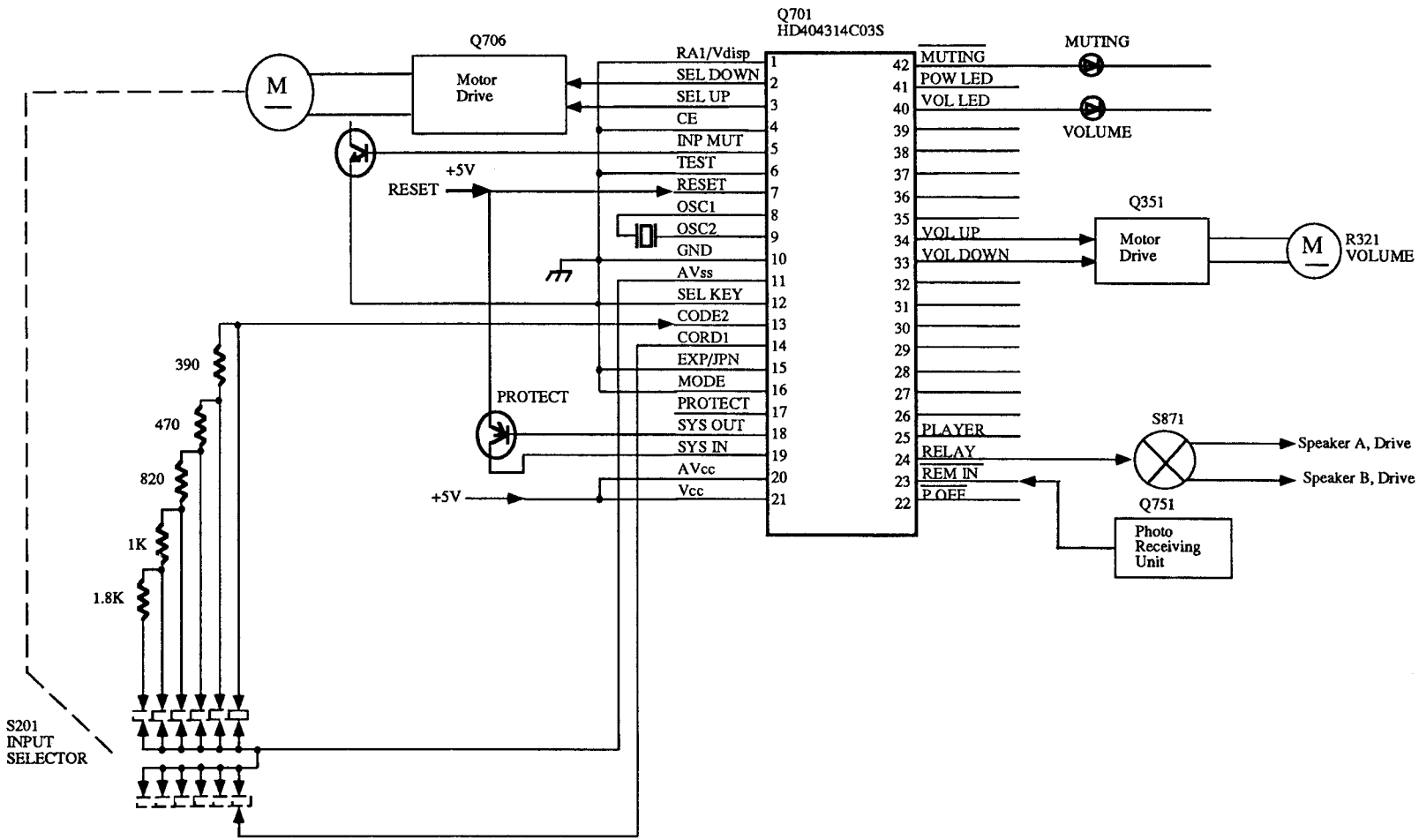
1) Connect the DC voltmeter to the terminals P621and P622 (VCT and IID) on the main circuit pc board.
2) Adjust the trim resistors R617 and R618 so that the indicator of voltmeter becomes 3.5 - 4.5 mV.
3) After 4 - 6 minutes of heat runing, readjust R617 and R618 to get 5.0 - 6.0 mV.
   NOTE: Set Volume knob to the minimum position.

3. Check of operation of protection circuitry

1) Check of operation of protection relay.
   (1) Confirm that the relay turns ON approximately 5 seconds after the power switch is turned ON.
   (2) The relay should turn OFF approximately 0.5 seconds after the power switch is turned OFF.
2) Check of DC detection
   (1) Turn the power on with no load.
   (2) After the speaker relay turns ON, apply DC +1～1.5V to the CD input terminals.Confirm that the relay turns OFF.
   (3) Confirm that operation is the same as (2) above when an input of DC -1～-1.5V is applied.
   Note) Under no circumstances connect a load or short the speaker terminals when performing the above test.
3) Confirmation of current detection operation
   (1) Signal input from the circuit illustrated below with no load.
   (2) Confirm that the speaker relay does not turn OFF even when a 2 ohm load is connected when a peak value of 35Vp-p is output.
   (3) Next, confirm that when a 1 ohm load is connected the speaker relay switches OFF and ON a couple of times and then stays OFF.
   Note) The period before that relay stays OFF should not last for more than 10 second. Relay OFF status can be canceled by switching the power OFF.



MICROPROCESSOR CONNECTION DIAGRAM



TERMINAL DESCRIPTION

Q701:HD404314C03S

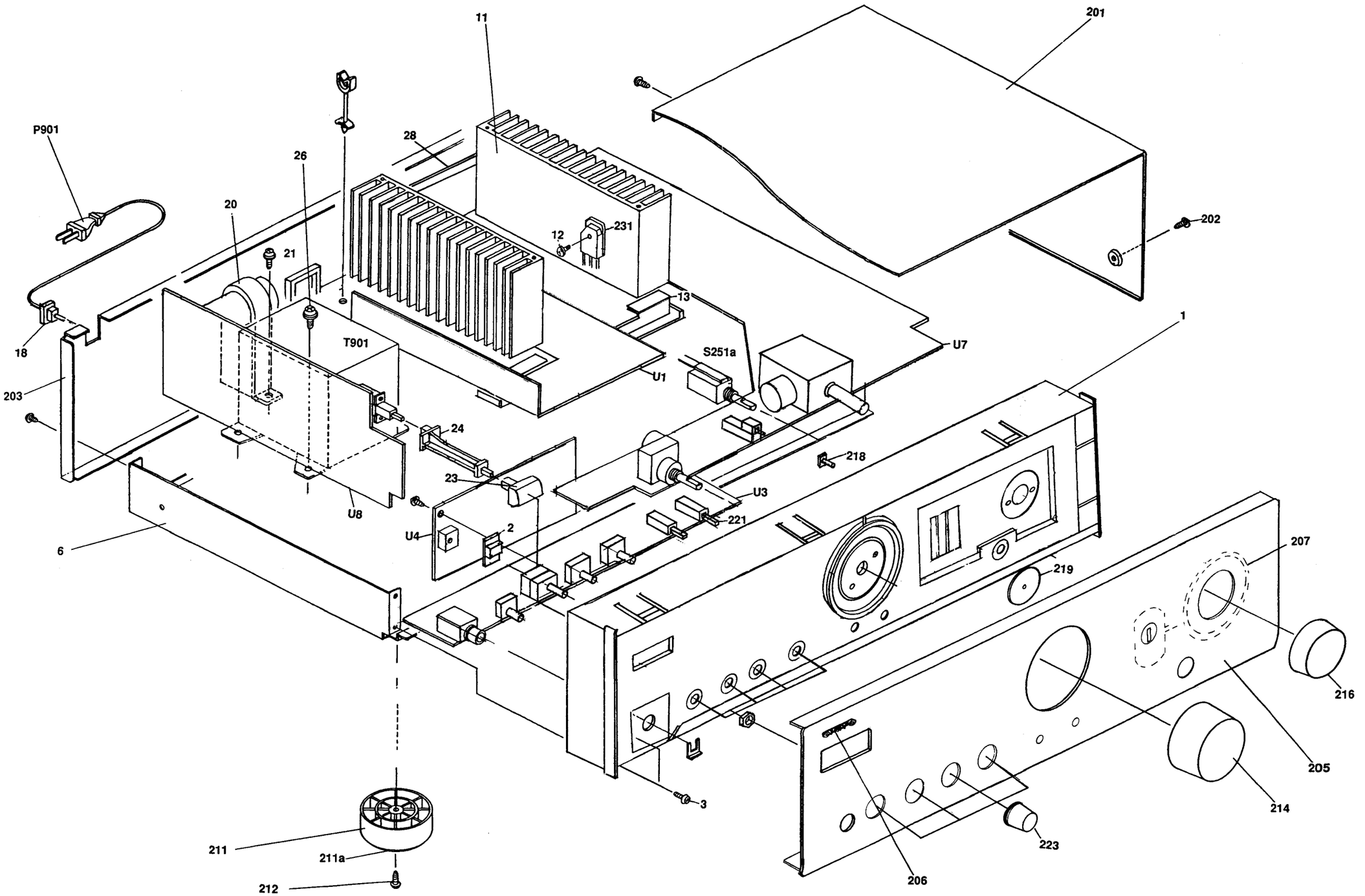
<table>
<tr><th>Pin No.</th><th>CODE</th><th>FUNCTION</th><th>I/O</th><th>DESCRIPTION</th></tr>
<tr><td>1</td><td>PA1/Vdisp</td><td></td><td>---</td><td>Not used. To be connected with GND.</td></tr>
<tr><td>2</td><td>ROO/$\overline{SCK}$</td><td>SEL $\overline{DOWN}$</td><td>I/O</td><td rowspan="2">UP/DOWN Output terminal for Input selector.
<table><tr><th>OPERATION</th><th>SEL UP</th><th>SEL DOWN</th></tr><tr><td>STOP</td><td>H</td><td>H</td></tr><tr><td>UP</td><td>H</td><td>L</td></tr><tr><td>DOWN</td><td>L</td><td>H</td></tr></table></td></tr>
<tr><td>3</td><td>R01/SI</td><td>SEL UP</td><td></td></tr>
<tr><td>4</td><td>R02/SO</td><td>CE</td><td>---</td><td>Not used. To be connected with GND.</td></tr>
<tr><td>5</td><td>R03/TOC</td><td>INP MUT</td><td>OUT</td><td>Muting output terminal. Active "H".</td></tr>
<tr><td>6</td><td>TEST</td><td>TEST</td><td>---</td><td>Shipment Test. To be connected with GND.</td></tr>
<tr><td>7</td><td>$\overline{RESET}$</td><td>$\overline{RESET}$</td><td>IN</td><td>Input terminal for Reset signal. Active "L".</td></tr>
<tr><td>8</td><td>OSC1</td><td>Xtal</td><td>---</td><td>Terminal for connecting with Ceramic oscillator (4.0MHz)</td></tr>
<tr><td>9</td><td>OSC2</td><td>Xtal</td><td>---</td><td></td></tr>
<tr><td>10</td><td>GND</td><td>GND</td><td>---</td><td>Ground terminal.</td></tr>
<tr><td>11</td><td>AVss</td><td>AVss</td><td>---</td><td>Ground terminal of A/D converter.</td></tr>
<tr><td>12</td><td>R30/AN0</td><td>SEL KEY</td><td>IN</td><td>Input terminal for when changing over Input Selector.
Through A/D conversion, the selector will be detector on its right or left rotation.</td></tr>
<tr><td>13</td><td>R31/AN1</td><td>CODE 2</td><td>IN</td><td>Code input terminal for detecting position of input switch of Motor driver.</td></tr>
<tr><td>14</td><td>R32/AN2</td><td>CODE 1</td><td>IN</td><td>Code input terminal for detecting position of input switch of Motor driver.</td></tr>
<tr><td>15</td><td>R33/AN3</td><td>EXP/JPN</td><td>IN</td><td>Input terminal for change-over between Japan model and Export model.</td></tr>
<tr><td>16</td><td>R40/AN4</td><td>MODE</td><td>IN</td><td>Input terminal for initialization to change over operation mode.</td></tr>
<tr><td>17</td><td>R41/AN5</td><td>PROTECT</td><td>IN</td><td>Input terminal for detecting protect operation.</td></tr>
<tr><td>18</td><td>R42/AN6</td><td>$\overline{SYS\ OUT}$</td><td>OUT</td><td>Output terminal for System Code.</td></tr>
<tr><td>19</td><td>R43/AN7</td><td>SYS IN</td><td>IN</td><td>Input terminal for System Code.</td></tr>
<tr><td>20</td><td>AVcc</td><td>AVcc</td><td></td><td>Analog reference voltage for A/D conversion.</td></tr>
<tr><td>21</td><td>Vcc</td><td>Vcc</td><td>---</td><td>Power (+5V) terminal.</td></tr>
<tr><td>22</td><td>D0/$\overline{INT0}$</td><td>$\overline{P\ OFF}$</td><td>IN</td><td>Input terminal for Detecting Power suspension.
However, "L" 100 μ S or under shall be ignored.</td></tr>
<tr><td>23</td><td>D1/$\overline{INT1}$</td><td>$\overline{REM\ IN}$</td><td>IN</td><td>Remote control signal input terminal.</td></tr>
<tr><td>24</td><td>D2/EVENB</td><td>RELAY</td><td>OUT</td><td>Output terminal for controlling relay. "H" when ON.</td></tr>
<tr><td>25</td><td>D3/BUZZ</td><td>PLAYER</td><td></td><td>Not used.</td></tr>
<tr><td>26</td><td>D4/STOPC</td><td></td><td rowspan="7">---</td><td rowspan="7">Not used.</td></tr>
<tr><td>27</td><td>D5</td><td></td></tr>
<tr><td>28</td><td>D6</td><td></td></tr>
<tr><td>29</td><td>D7</td><td></td></tr>
<tr><td>30</td><td>D8</td><td></td></tr>
<tr><td>31</td><td>R80</td><td></td></tr>
<tr><td>32</td><td>R81</td><td></td></tr>
<tr><td>33</td><td>R82</td><td>VOL DOWN</td><td rowspan="2">OUT</td><td rowspan="2">UP/DOWN output terminal for Volume. Active "H".
<table><tr><th>OPERATION</th><th>VOL UP</th><th>VOL DOWN</th></tr><tr><td>STOP</td><td>H</td><td>H</td></tr><tr><td>VOL UP</td><td>H</td><td>L</td></tr><tr><td>VOL DOWN</td><td>L</td><td>H</td></tr><tr><td>POWER OFF</td><td>L</td><td>L</td></tr></table>POWER ON</td></tr>
<tr><td>34</td><td>R83</td><td>VOL UP</td></tr>
<tr><td>35</td><td>R10</td><td></td><td rowspan="5"></td><td rowspan="5">Not used.</td></tr>
<tr><td>36</td><td>R11</td><td></td></tr>
<tr><td>37</td><td>R12</td><td></td></tr>
<tr><td>38</td><td>R13</td><td></td></tr>
<tr><td>39</td><td>R20</td><td></td></tr>
<tr><td>40</td><td>R21</td><td>VOL LED</td><td>---</td><td>Output terminal for volume LED.</td></tr>
<tr><td>41</td><td>R22</td><td>POW LED</td><td>---</td><td>Not used..</td></tr>
<tr><td>42</td><td>R23</td><td>$\overline{MUTING}$</td><td>OUT</td><td>Output terminal for Audio muting LED, Remote control.</td></tr>
</table>

CHASSIS EXPLODED VIEW PARTS LIST

REF. NO.	PART NO.	DESCRIPTION
1	27110966Y	Front Bracket <B>
	27110967Y	Front Bracket <S>
2	28191765Y	Clear Plate (RE)
3	838130088Y	3TTB+8B, Self-tapping screw
6	27100325Y	Chassis
11	27160380Y	Radiator
12	801433Y	3SMS8W.SW+14B(BC)
13	27130784Y	Bracket (H-1)
15	27130785Y	Bracket (H-2)
18	27300750	Cord Bushing #2271
20	27190995Y	Holder (CH)
21	831430088Y	3TTW+8B(BC) Self-tapping screw
23	28325465Y	Knob (POW) <B>
	28325466Y	Knob (POW) <S>
24	27273162Y	Joint (POW)
26	830440089Y	4TTC+8C(BC) Self-tapping screw
28	28140693Y	Cushion, 1.5x185x10
201	28184667Y	Top Cover <B>
	28184668Y	Top Cover <S>
202	838430088	3TTB+8B(BC), Self-tapping screw
203	27122294Y	Rear Panel <P>
	27122329Y	Rear Panel <PT>
	27122295Y	Rear Panel <WT>
205	27211880Y	Front Panel <B>
	27211881Y	Front Panel <S>
206	28135244Y	Badge <B>
	28135245Y	Badge <S>
207	272567957Y	Guide (SEL) <B>
	272567958Y	Guide (SEL) <S>
211	27175321Y	Leg
211a	28141309Y	Cushion, Leg
212	837440169Y	4TTT+16C(BC),Self-tapping screw
214	28325469	Knob (VOL) <B>
	28325470	Knob (VOL) <S>
216	28325471	Knob (SEL) AS <B>
	28325472	Knob (SEL) AS <S>
218	28325473Y	knob (D)
219	28141314Y	Cushion (D)
221	28325274Y	Knob (PUSH) <B>
	28325275Y	Knob (PUSH) <S>
223	28325405Y	Knob (TONE) <B>
	28325474Y	Knob (TONE) <S>
231	223027	Isolation Sheet
251	880025-1Y	Plastic Rivet <P,PT>
F901	252164	⚠ 5A-UL/T237, Fuse <WT>
F902	252075	⚠ 2.5A-SE-EAK, Fuse
F903	252070	⚠ 1A-SE-EAK, Fuse <P,PT>
P901	253193HITY	⚠ AS-CEE, AC Cord <P,PT>
	253233KAW	⚠ AS-CEE-2, <WT>
S251a	25030369AY	NRSF-106-20BU, Rec. Selector
T901	2301242Y	⚠ NPT-1289P, Power transformer <P,PT>
	2301243Y	⚠ NPT-1289DG <WT>
Q609,Q610	2202684 or	2SA1859-Y or
	2202683	2SA1859-O Power transistor
Q611,Q612	2202694 or	2SC4883-Y or
	2202693	2SC4883-O Power transistor
Q613,Q614	2201664 or	2SA1492-Y or
	2201665 or	2SA1492-P or
	2201663	2SA1492-O Power transistor
Q615,Q616	2201654 or	2SC3856-Y or
	2201655 or	2SC3856-P or
	2201653	2SC3856-O Power transistor
U1	1A726511-1AY	NAAF-5911-1AY, Main circuit pc board ass'y <P,PT>
	1A726511-1BY	NAAF-5911-1BY, Main circuit pc board ass'y <WT>
U2	1A726512-1AY	NAETC-5912-1AY, Bias pc board ass'y <P,PT>
	1A726512-1BY	NAETC-5912-1BY, Bias pc board ass'y <WT>
U3	1A726513-1AY	NAAF-5913-1AY, Tone circuit pc board ass'y <P,PT>
	1A726513-1BY	NAAF-5913-1BY, Tone circuit pc board ass'y <WT>
U4	1A726514-1AY	NADG-5914-1AY, Digital circuit pc board ass'y <P,PT>
	1A726514-1BY	NADG-5914-1BY, Digital circuit pc board ass'y <WT>
U7	1A726516-1AY	NASW-5916-1AY, Switches circuit pc board ass'y <P,PT>
	1A726516-1BY	NASW-5916-1BY, Switches circuit pc board ass'y <WT>
U8	1A726517-1AY	NASW-5917-1AY, Power supply circuit pc board ass'y <P,PT>
	1A726517-1BY	NASW-5917-1BY, Power supply circuit pc board ass'y <WT>

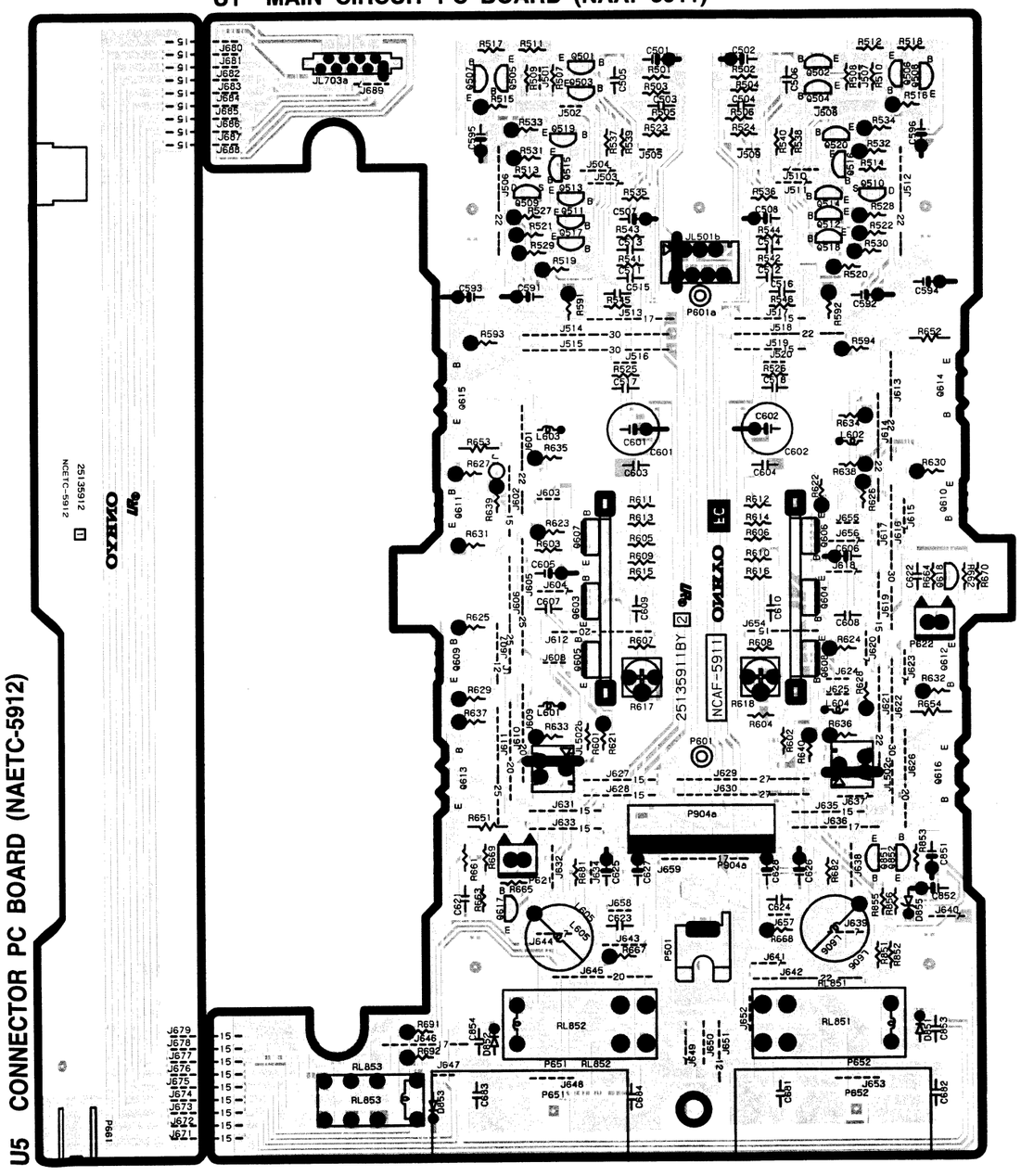
NOTE: <B> Black model
<S> Silver model
<P> 230V model only
<WT> Taiwanes model
<PT> Asian model only

CHASSIS EXPLODED VIEW

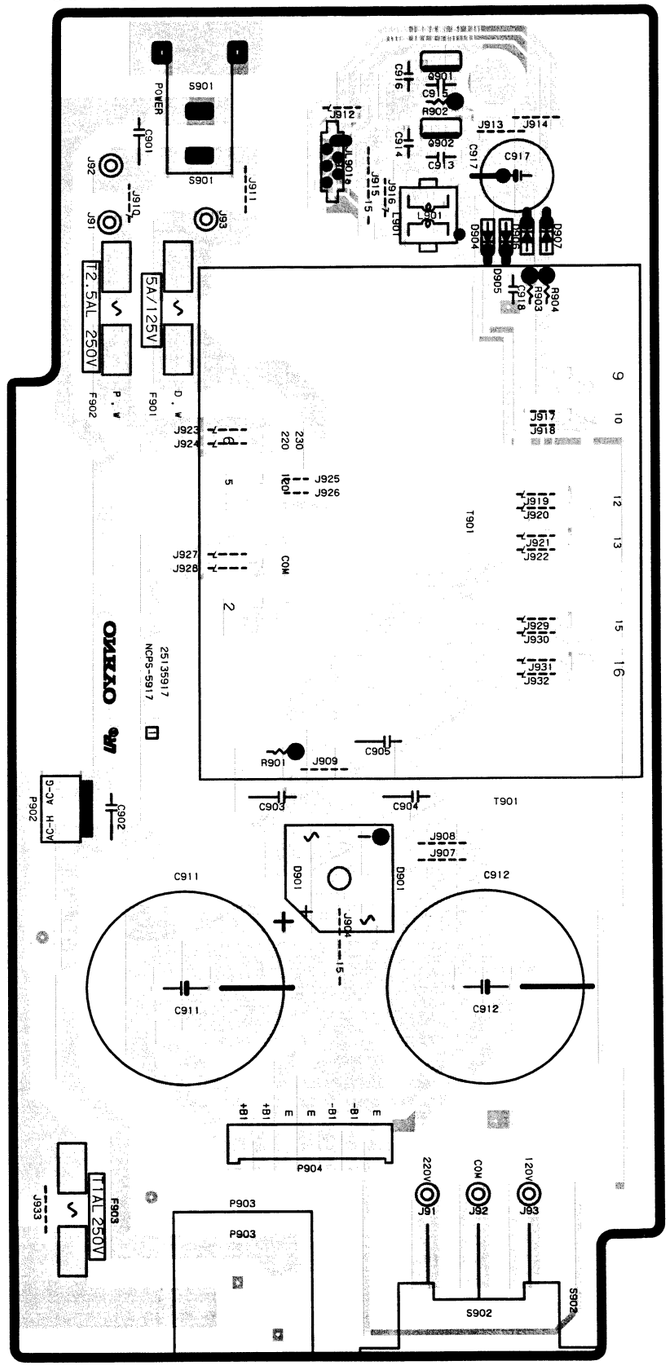


PRINTED CIRCUIT BOARD VIEW FROM BOTTOM SIDE

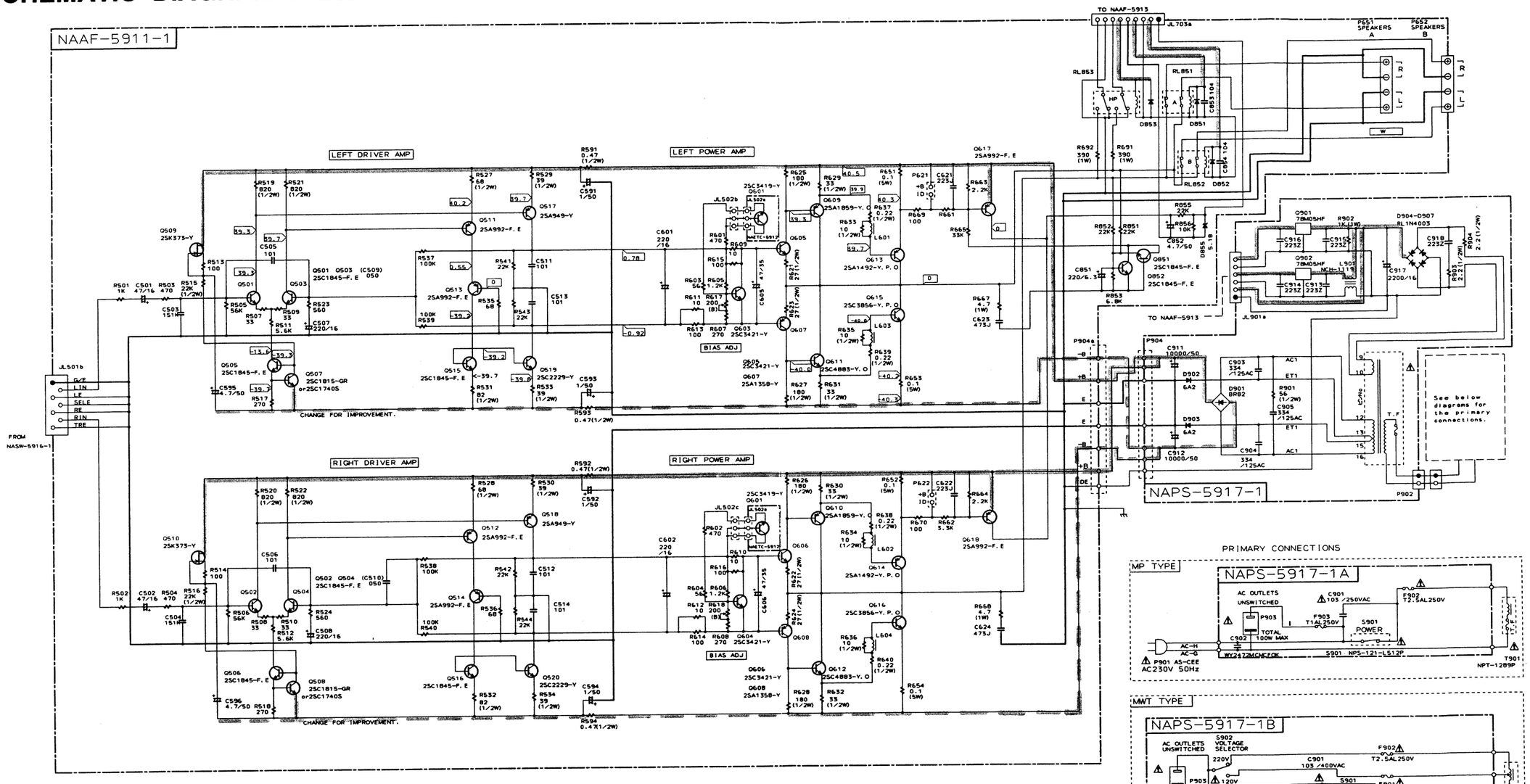
U1 MAIN CIRCUIT PC BOARD (NAAF-5911)



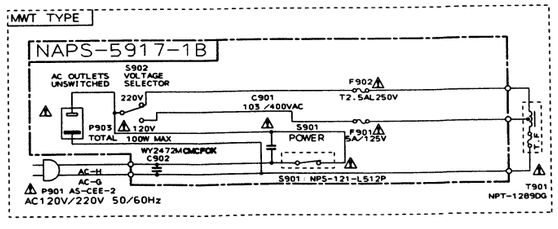
U8 POWER SUPPLY CIRCUIT PC BOARD (NAPS-5917)



SCHEMATIC DIAGRAM PART 2



PRIMARY CONNECTIONS



NOTE

- THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE(MEASURED WITH VOLTMETER) CIS DC VOLTAGE. (NO INPUT SIGNAL)
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS (◆) ARE IN μF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED. EX)050→5pF, 330→33pF, 331→330pF, 333→0.033μF
- ALL RESISTORS ARE IN OHMS 1/4 WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES IN PC BOARD ARE THE PRINTING SIDE OF THE PARTS. EX) PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

	MP	MWT
NCAF-5911-1	1A	1B
R503, R504	470 ohm	0 ohm
NAPS-5917-1	1A	1B

: +B
: −B

PRINTED CIRCUIT BOARD-PARTS LIST

U1 MAIN CIRCUIT PC BOARD (NAAF-5911)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistors	
Q501,Q502	2211733 or 2211732	* 2SC1845-E or 2SC1845-F
Q503-Q506	2211732 or 2211733	* 2SC1845-F or 2SC1845-E
Q507,Q508	2211255 or 2211184	2SC1815-GR or 2SC1740-S
Q509,Q510	2213334	2SK373-Y
Q511-Q514	2211792 or 2211793	2SA992-F or 2SA992-E
Q515,Q516	2211732 or 2211733	2SC1845-F or 2SC1845-E
Q517,Q518	2211354	2SA949-Y
Q519,Q520	2211634	2SC2229-Y
Q603-Q606	2212654	2SC3421-Y
Q607,Q608	2212644	2SA1358-Y
Q617,Q618	2211792 or 2211793	2SA992-F or 2SA992-E
Q851,Q852	2211732 or 2211733	2SC1845-F or 2SC1845-E
	Diodes	
D851-D853	223163 or 223205 or 223222T	1SS133 or 1SS270A or WG713A
D855	224470512	MTZJ5.1B, Zener
	Coils	
L601-L604	5597-45502	
	Capacitors	
C501,C502	393044707	47 μ F,16V, Plastic
C503,C504	374721515	150pF±5%,50V, Plastic
C507,C508	354742219	220 μ F,16V,Elect.
C591-C594	354780109	1 μ F,50V,Elect.
C595,C596	354780479	4.7 μ F,50V,Elect.
C601,C602	354742219	220 μ F,16V,Elect.
C605,C606	354764709	47 μ F,35V,Elect.
C621,C622	374722234	0.022 μ F±5%,50V, Plastic
C623,C624	374724734	0.047 μ F±5%,50V, Plastic
C801	374724734	0.047 μ F±5%,50V, Plastic
C851	354722219	220 μ F,6.3V,Elect.
C852	354780479	4.7 μ F,50V,Elect.
C853,C854	374721044	0.1 μ F±5%,50V, Plastic
	Resistors	
R515,R516	443522234	22k ohm±5%,1/2W, Metal oxid
R519-R522	443528214	820ohm±5%,1/2W, Metal oxid
R527,R528	443526804	68ohm±5%,1/2W, Metal oxid
R529-R534	443523904	39ohm±5%,1/2W, Metal oxid
R531,R532	443528204	82ohm±5%,1/2W, Metal oxid
R591-R594	453534794	0.47ohm±5%,1/2W, Metal
R617,R618	5210255	N06HR, 200BC, BIAS ADJUST
R621-R624	443522704	27ohm±5%,1/2W, Metal oxid
R625-R628	443521814	180ohm±5%,1/2W, Metal oxid
R629-R632	443523304	33ohm±5%,1/2W, Metal oxid
R633-R636	443521004	10ohm±5%,1/2W, Metal oxid
R637-R640	453532294	0.22ohm±5%,1/2W, Metal
R651-R654	4000116	0.1ohm±10%, 5W,Metal Plate
R667,R668	453630474	4.7ohm±5%,1/2W, Metal
R691,R692	443623914	390ohm±5%,1/2W, Metal oxid
	Terminal	
P651,P652	25060193	NTM4PDMN115, SPEAKER
	Plugs	
P621,P622	25055038	NPLG-2P29
P904a	25055170	NPLG-7P154

CIRCUIT NO.	PART NO.	DESCRIPTION
	Relays	
RL851,RL852	25065275	NRL-2P5A-DC12-038
RL853	25065469	NRL-2P1A-DC12-078

U2 BIAS PC BOARD (NAETC-5915)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistor	
Q601	2212864	2SC3419-Y

U3 TONE CIRCUIT PC BOARD (NAAF-5913)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistor	
Q871	2211164	2SC2120-Y
	Capacitors	
C311,C312	374726814	680pF±5%,50V, Plastic
C331,C332	374721524	1500pF±5%,50V, Plastic
C333,C334	374721534	0.015 μ F±5%,50V, Plastic
C335,C336	374721844	0.18 μ F±5%,50V, Plastic
C337,C338	374722234	0.022 μ F±5%,50V, Plastic
	Resistors	
R331	5104395	N16RGMC250K, MN20F, BALANCE
R332	5104397	N16RGMC100K, 20F, TREBLE
R333	5104396	N16RGMC70K, 88K20F, BASS
	Terminals	
P301,P661	25065425	TRM
	Jack	
P871	25045164	HLJ4317-01-3020, HEADPHONES
	Switches	
S301,S302	25035407	NPS-122-L371,ATTENUATOR, LOUDNESS
S871	25030335	NRSF-124-20 BU, SPEAKER

U4 DIGITAL CIRCUIT PC BOARD (NADG-5914)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q351	22240239	TA7291S
Q701	22241068	HD404314C03S
Q704	222951	M51943BS
Q706	22240358	LB1638
	Transistors	
Q702	2213510	DTA114ES
Q703	2213290	DTC114ES
	Diodes	
D351	22380260T	RL1N4003
D701,D702	223163 or 223205 or 223222	1SS133 or 1SS270A or WG713A
D703	224470562	MTZJ5.6B, Zener
	Coils	
L701-L704	230905	BL02RN1-R62
	Remote Sensor	
Q751	24130011	PIC-12043TE2
	Capacitors	
C701	375524744	0.47 μ F+-5%,50V, Plastic
C703	354744709	47 μ F,16V,Elect.
C713	374724744	0.47 μ F±5%,50V, Plastic
	Plug	
P701	25055656	NPLG-6P612
	Resonator	
X701	3010150	CST4.00MGW

CIRCUIT NO.	PART NO.	DESCRIPTION
	Radiator	
	27160357	(S3)

U7 SWITCHES CIRCUIT PC BOARD (NASW-5916)

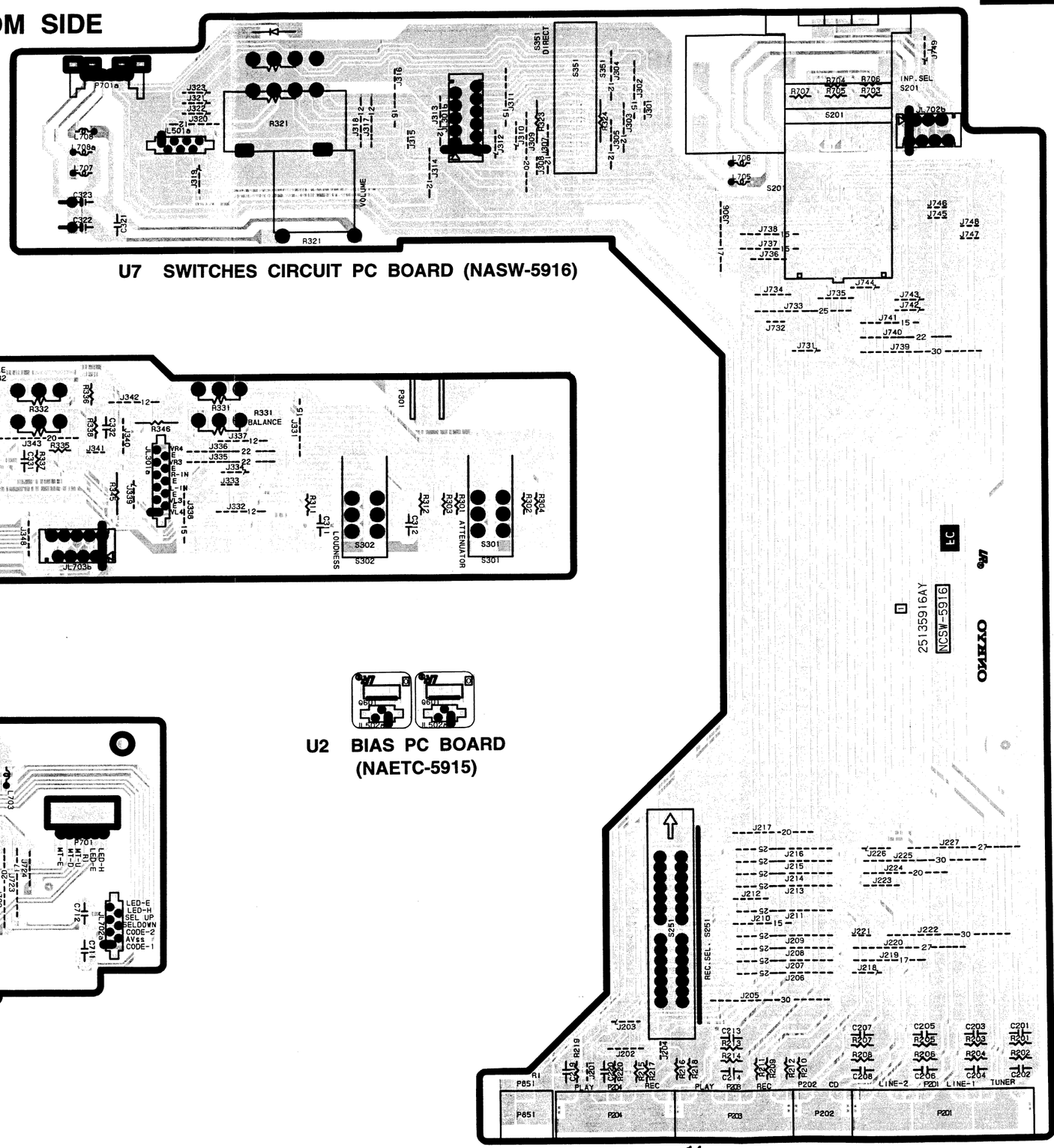
CIRCUIT NO.	PART NO.	DESCRIPTION
	Coils	
L705-L708	230905	BL02RN1-R62
	Resistor	
R321	5104394	N16RGL50KBT, 25F, VOLUME
	Jacks	
P201	25045300	NPJ-6PDBL159
P202	25045304	NPJ-2PDBL163
P203,P204	25045305	NPJ-4PDBL164
P851	25045330 or 25045481	NPJ-2PDBL184 or NPJ-2PDBL299
	Socket	
P701a	25051043	NSCT-6P830
	Switches	
S201	25030391	NRSF-336-25BA, INPUT SELECTOR
S251	25065079	NSS-4643, REC SELECTOR
S351	25040076	NLS-162-915-L049, SOURCE DIRECT

U8 POWER SUPPLY CIRCUIT PC BOARD (NAPS-5917)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q901,Q902	222780055NEC	78M05HF
	Diodes	
D901	22380280	⚠ BR82
D904-D907	22380260	⚠ RL1N4003
	Capacitors	
C901	3500191	0.01 μ F±20%, 250V, Ceramci
C902	3500163	WY2472M, CMCFOK, IS C
C903-C905	374503345	0.33 μ F±10%,125V,Plastic
C911,C912	3504295	10000 μ F,50V,Elect.
C917	354742229	2200 μ F,16V,Elect.
	Resistors	
R901	443525604	56ohm±5%,1/2W, Metal Oxid
R902	443621024	1k ohm±5%,1W,Metal oxid
R903,R904	453530224	2.2ohm±5%,1/2W,Metal
	Fuse Holders	
F901a	25050065	YSH403T <WT>
F902a	25050065	YSH403T
F903a	25050065	YSH403T
	Coil	
L901	231069A	NCH-1119
	Socket	
P904	2009990435	NSAS-14P0579
	Plug	
P902	25055675	⚠ NPLG-2P631
	AC Outlet	
P903	25051637	⚠ NSCT-2P1424
	Switches	
S901	25035550	NPS-121-L512P
S902	25065437	NSS-22157P <WT>

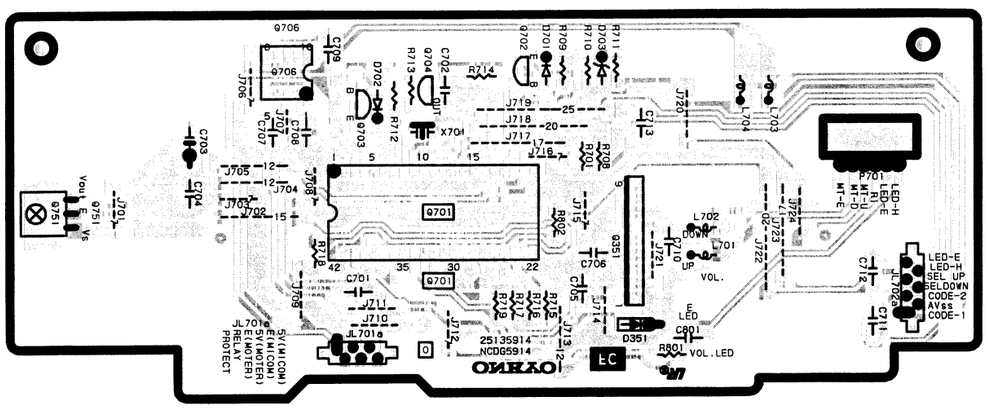
NOTE: <P> 230V model only
<WT> Taiwanes model only
<PT> Asian model only

PRINTED CIRCUIT BOARD VIEW FROM BOTTOM SIDE



U7 SWITCHES CIRCUIT PC BOARD (NASW-5916)

U3 TONE CIRCUIT PC BOARD (NAAF-5913)

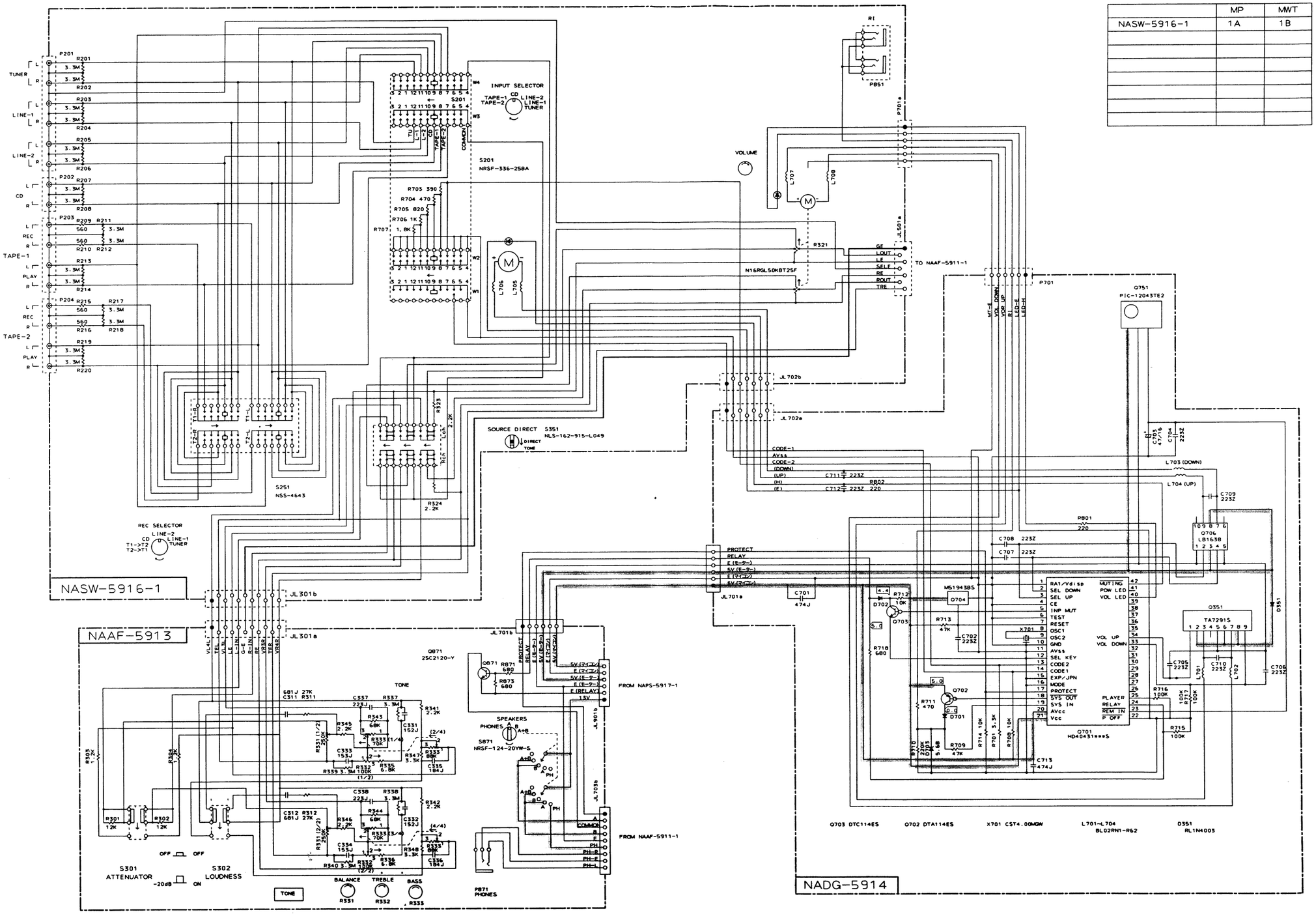


U4 DIGITAL CIRCUIT PC BOARD (NADG-5914)

U2 BIAS PC BOARD (NAETC-5915)

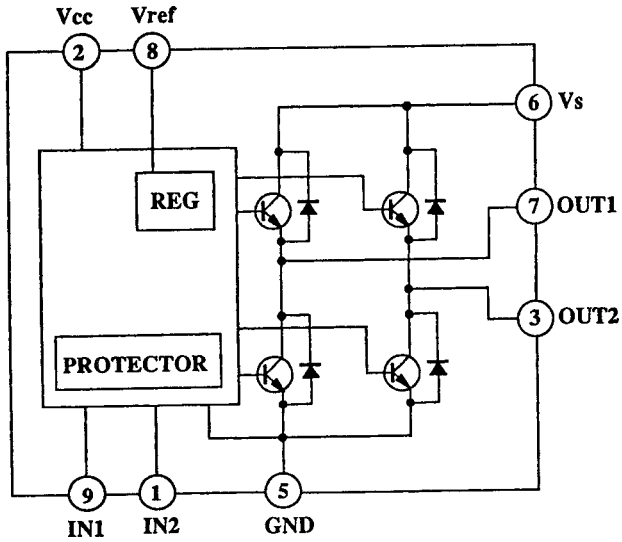
SCHEMATIC DIAGRAM PART-1

	MP	MWT
NASW-5916-1	1A	1B



IC BLOCK DIAGRAMS

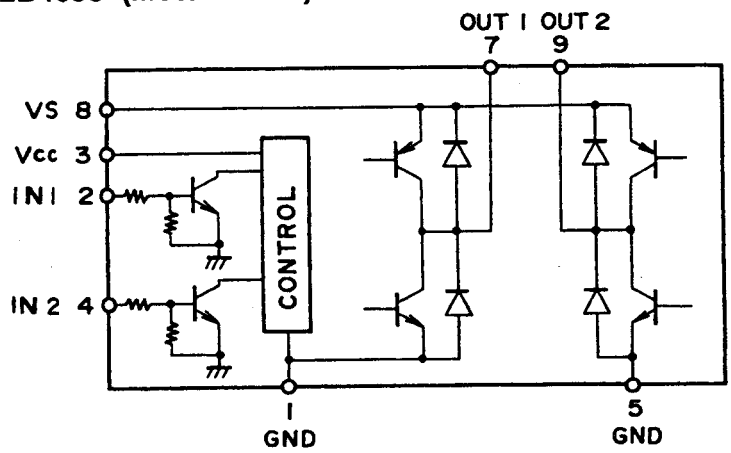
Q351 :
TA7291S (Volume Motor Drive)



INPUT		OUTPUT		
IN1	IN2	OUT1	OUT2	MODE
0	0	∞	∞	STOP
1	0	H	L	CW/CCW
0	1	L	H	CCW/CW
1	1	L	L	BRAKE

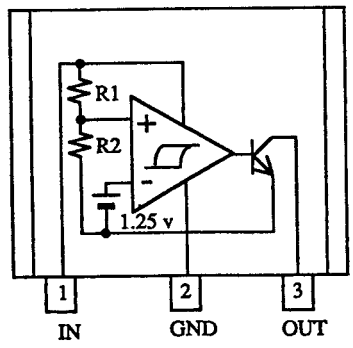
CCW:Counter clockwise direction
CW:Clockwise direction

Q706 :
LB1638 (Motor Drive)



IN 1	IN 2	OUT 1	OUT 2	MODE
H	L	H	L	NORMAL
L	H	L	H	REVERSE
H	H	L	L	BRAKE
L	L	OFF	OFF	WAIT

Q704 :
M51943BS (System Reset)



PACKING PARTS LIST

REF. NO.	PART NO.	DESCRIPTION
1	29053112Y	Carton Box <B><P>
	29053114Y	Carton Box <S><P>
	29053113Y	Carton Box <PT,WT>
2	29091763Y	Pad AS
3	29100034-1AY	Styrene Bag 850x650
4	282321Y	Staple
	Accessary bag ass'y	
	29100097-1AY	Styrene Bag 350x250
	29342391A	Instruction Manual, E
	29342393A	Instruction Manual, T<PT,WT>
	29342435A	Instruction Manual, U3FSI <P>
	29342436AY	Instruction Manual, U3GSwD <P>
	29355133AY	Instruction Sheet (DBP) <P>
	24140314Y	RC-314S, Remote control transmitter
	25055018	CV-K-1, Conversion Plug <WT>
	3010194Y	UM-3, Two Battery
	29362115Y	Label (EAN) AS <P,WT>
	29362116Y	Label (EAN) AS <S><P>
	29361786Y	Label (Malaysia) <PT>

NOTE: <B> Black model
<S> Silver model
<P> 230V model only
<WT> Taiwanes model only
<PT> Asian model only

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